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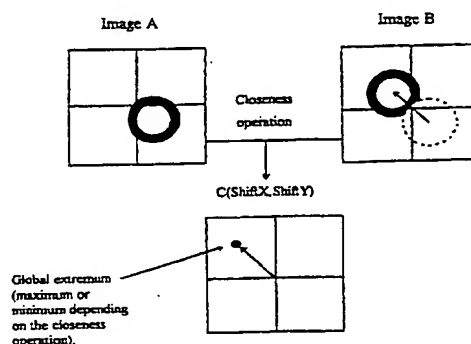
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(54) **Intravascular ultrasound enhanced image and signal processing**

(57) A device and method for intravascular ultrasound imaging. An ultrasound signal transmitter and detector is introduced into and may be moved through a bodily lumen. The ultrasound signal transmitter and detector transmits ultrasonic signals and detects reflected ultrasound signals which contain information relating to the bodily lumen. A processor coupled to the ultrasound signal transmitter and detector is programmed to derive a first image or series of images and a second image or series of images from the detected ultrasound signals. The processor is also programmed to compare the second image or series of images to the first image or series of images respectively. The processor may be programmed to stabilize the second image in relation to the first image and to limit drift. The processor may also be programmed to monitor the first and second images for cardiovascular periodicity, image quality, temporal change and vasomotion. It can also match the first series of images and the second series of images.

Figure 2



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PARTIAL EUROPEAN SEARCH REPORT

Application Number

which under Rule 45 of the European Patent Convention shall be considered, for the purposes of subsequent proceedings, as the European search report

EP 98 11 1201

DOCUMENTS CONSIDERED TO BE RELEVANT			
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X	WENGUANG L ET AL: "SEMIAUTOMATIC FRAME-TO-FRAME TRACKING OF THE LUMINAL BORDER FROM INTRAVASCULAR ULTRASOUND" PROCEEDINGS OF THE COMPUTERS IN CARDIOLOGY MEETING, VENICE, SEPT. 23 - 26, 1991, no. MEETING 18, 23 September 1991 (1991-09-23), pages 353-356, XP000312430 INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS ISBN: 0-8186-2485-X * page 353, right-hand column, paragraph 3 - page 355, left-hand column, paragraph 2 *	1-6, 26, 27, 105	A61B8/12 G01S15/89
Y	US 5 623 929 A (WENG LEE) 29 April 1997 (1997-04-29) * column 2, line 7 - column 3, line 30 * * column 6, line 20 - line 50; claims; figures * --- -/--	1-6, 9-11, 13-19, 25-31, 35, 105-107	TECHNICAL FIELDS SEARCHED (Int.Cl.6) A61B G01S
INCOMPLETE SEARCH			
<p>The Search Division considers that the present application, or one or more of its claims, does/do not comply with the EPC to such an extent that a meaningful search into the state of the art cannot be carried out, or can only be carried out partially, for these claims.</p> <p>Claims searched completely : 1-46, 105-120</p> <p>Claims searched incompletely :</p> <p>Claims not searched : 47-104, 121-124</p> <p>Reason for the limitation of the search: Article 52 (4) EPC - Method for treatment of the human or animal body by surgery</p>			
Place of search THE HAGUE		Date of completion of the search 31 August 1999	Examiner Manschot, J
CATEGORY OF CITED DOCUMENTS		<p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>	
<p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p>			

EPO FORM 1503 03.82 (P4/C07)



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**ANNEX TO THE EUROPEAN SEARCH REPORT
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The members are as contained in the European Patent Office EDP file on
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31-08-1999

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